

REMARKS

Claim 94 has been amended. Claims 95, 96, and 97-102 have been cancelled. Claims 90-94 are pending in the present application.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

I. Objections to Claims 103 and 104

Claims 103 and 104 were objected to under 37 CFR 1.75 as being substantial duplicates of claim 94. The Office Action stated:

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). It is unclear that the trichodiene synthase of claim 94 from *Fusarium venenatum* strain ATCC 20334 differs from the trichodene synthase encoded by SEQ ID NO: 1 and from the trichodiene synthase contained in pTri5. SEQ ID NO: 1 and pTri5 are both obtained from *Fusarium venenatum* strain ATCC 20334 and therefore should be the same trichodiene synthase of claim 94 from *Fusarium venenatum* strain ATCC 20334.

Claims 103 and 104 have been canceled rendering the rejection moot.

For the foregoing reason, Applicants submit that this objection has been overcome and respectfully request withdrawal of the objection.

II. The Rejection of Claims 103 and 104 under 35 U.S.C. § 112, Second Paragraph

Claims 103-104 were rejected under 35 U.S.C. 112, second paragraph, as being vague and indefinite in that the metes and bounds of "the synthase having the amino acid sequence of SEQ ID NO: 2" are unclear if the term "having" is intended to be open or closed language. The Office Action states: "If it is closed then it is unclear how the synthase of claims 103 -104 differs from that previously recited in claim 91, which recites 'the synthase consisting of amino acids of SEQ ID NO: 2'".

Claims 103 and 104 have been canceled rendering the rejection moot.

For the foregoing reason, Applicants submit that this rejection under 35 U.S.C. § 112 has been overcome and respectfully request withdrawal of the rejection.

III. The Rejection of Claims 94 and 100 under 35 U.S.C. § 112, First Paragraph

Claims 94 and 100 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention. The Office Action stated:

Since the specific *Fusarium venenatum* cells deposited at ATCC 20334 are essential to the claimed invention, they must be obtainable by a repeatable method set forth in the specification or otherwise readily available to the public. The invention does not recite use of any cells but instead specifically claims *Fusarium venenatum* cells deposited at ATCC as strain ATCC 20334. The *Fusarium venenatum* cells deposited at ATCC as strain ATCC 20334 are commercially available, however, commercial availability is not necessarily evidence that the Public will have access to the material for the life of a Patent (see MPEP 2404.01) (emphasis added). Others deposited the *Fusarium venenatum* of the invention, their availability in an unrestricted form for the life of a patent issued on the instant application cannot be ensured. Applicants must therefore deposit the specific *Fusarium venenatum* recited in the claims and thus satisfy the deposit requirement under 37 CFR 1.801-1.809 (see enclosed Suggestion for deposit of biological material).

This rejection is respectfully traversed.

Applicants submit that the microorganism recited in the claims is "known and readily available" for the reasons of record. However, to further prosecution of the present application, Applicants have deposited the strain as NRRL 30747. Claim 94 has been amended to recite "NRRL 30747".

Applicants enclose a Statement under 37 C.F.R. § 1.808 that the strain was deposited under the Budapest Treaty and all restrictions will be removed upon the granting of the U.S. patent.

For the foregoing reason, Applicants submit that this rejection under 35 U.S.C. § 112 has been overcome and respectfully request withdrawal of the rejection.

IV. The Rejection of Claims 97-100 under 35 U.S.C. § 112, First Paragraph

Claims 97-100 were rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Office Action states:

The invention recites isolated functional fragments of trichodiene synthase. In view of the unpredictability of the art of predicting the functional nature of fragments of SEQ ID NO 2 deleted of any number of amino acids from the C-terminus and/or the N-terminus, undue experimentation would be required to practice the claimed methods with reasonable expectation of success, absent a specific and detailed description in the specification. Given the unpredictability of the art, the poorly developed state of the art with regard to predicting the structural/functional characteristics of a protein from primary amino acid sequence alone, the lack of working examples and the lack of guidance provided by applicants, the skilled artisan would have to have conducted undue, unpredictable experimentation to practice the claimed invention.

This rejection is respectfully traversed for reasons of record.

To further prosecution of the instant application, claims 97-100 have been canceled.

For the foregoing reasons, Applicants submit that the claims overcome the rejections under 35 U.S.C. § 112, first paragraph. Applicants respectfully request reconsideration and withdrawal of the

rejections.

V. The Rejection of Claims 97-100 under 35 U.S.C. § 112, First Paragraph

Claims 97-100 were rejected under 35 U.S.C. 112, first paragraph, because the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for reasons of record.

This rejection is respectfully traversed for reasons of record.

To further prosecution of the instant application, claims 97-100 have been canceled.

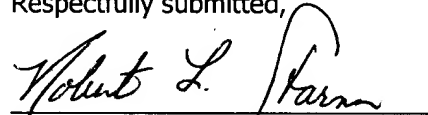
For the foregoing reasons, Applicants submit that the new claims overcome the rejections under 35 U.S.C. § 112, first paragraph. Applicants respectfully request reconsideration and withdrawal of the rejections.

VI. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

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Respectfully submitted,



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